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## PureTech Health plc

### **PureTech Health's Vedanta Biosciences Granted U.S. Patent Broadly Covering Methods of Treatment with Therapeutics Based on Bacterial Spore Fractions of Microbiota Obtained From Human Donors**

PureTech Health plc ("PureTech", LSE: PRTC), an advanced, clinical-stage biopharmaceutical company, is pleased to note that the United States Patent and Trademark Office (USPTO) has issued a new patent to Vedanta Biosciences. The latest issuance further strengthens Vedanta Biosciences' leading intellectual property position, broadly covering methods of treatment with therapeutic products based on human microbiota-derived bacterial spore fractions, including their use for the treatment of *Clostridium difficile* infections, inflammatory bowel disease (IBD), and graft versus host disease (GvHD), among others. The issued patent is exclusively licensed to Vedanta under an agreement with the University of Tokyo and provides coverage through at least 2031.

Bharatt Chowrira, President and Chief of Business and Strategy at PureTech Health, said: "This issuance is particularly impactful as we believe it grants Vedanta Biosciences the earliest priority dates for the therapeutic use of human-derived spore fractions, which is based on the pioneering, groundbreaking work of Dr. Kenya Honda, a scientific co-founder of Vedanta. We're pleased with the addition of this latest patent to Vedanta Biosciences' foundational IP portfolio in the microbiome field."

The full text of the announcement from Vedanta is as follows:

### **Vedanta Biosciences Granted U.S. Patent Broadly Covering Methods of Treatment with Therapeutics Based on Bacterial Spore Fractions of Microbiota Obtained From Human Donors**

**CAMBRIDGE, Massachusetts, May 30, 2017**— [Vedanta Biosciences](#), pioneering the development of a novel class of therapies designed to modulate pathways of interaction between the human microbiome and the host immune system, today announced that the United States Patent and Trademark Office (USPTO) has issued U.S. Patent No. 9,662,381. The patent broadly covers methods of treatment with therapeutic products based on human microbiota-derived bacterial spore fractions, including their use for the treatment of *Clostridium difficile*, inflammatory bowel disease (IBD), and graft versus host disease (GvHD), among others. The issued patent is exclusively licensed to Vedanta under an agreement with the University of Tokyo and provides coverage through at least 2031.

"This newly issued patent enjoys, to the best of our knowledge, the earliest priority dates for the therapeutic use of human-derived spore fractions." said Bernat Olle, Ph.D., Chief Executive Officer, "The expansion of our intellectual property estate in the use of bacterial spores for the treatment of autoimmune and infectious disease further strengthens Vedanta's leading intellectual property portfolio in the human microbiome field."

The patented technology is based on ground-breaking work by Dr. Kenya Honda, a scientific co-founder of Vedanta. Dr. Honda's work was described in landmark publications in [Science](#) and [Nature](#).

The invention potentially provides an avenue for the treatment of a variety of diseases including autoimmune diseases, such as IBD, and infectious diseases, such as *Clostridium difficile* infection, with compositions of bacterial spores obtained from human donors.

### **About Vedanta Biosciences**

Vedanta Biosciences, a subsidiary of PureTech Health (LSE: PRTC; [www.puretechhealth.com](http://www.puretechhealth.com)), is pioneering development of a novel class of therapies for immune and infectious diseases based on rationally designed consortia of bacteria derived from the human microbiome, with clinical trials expected to begin in 2017. Founded by PureTech Health and a group of world-renowned experts in immunology and microbiology, Vedanta Biosciences is a leader in the microbiome field with capabilities to discover, develop and manufacture drugs based on live bacterial consortia. Leveraging its proprietary technology platform and the expertise of its team of scientific co-founders, Vedanta Biosciences has isolated a vast collection of human-associated bacterial strains and characterised how the immune system recognises and responds to these microbes. This work has led to the identification of human commensal bacteria that induce a range of immune responses – including induction of regulatory T cells and Th17 cells, among others – as well as the characterisation of novel molecular mechanisms of microbial-host communication. These advances have been published in leading peer-reviewed journals including *Science*, *Nature (multiple)*, *Cell* and *Nature Immunology*. Vedanta Biosciences has harnessed these biological insights as well as data from clinical translational collaborations to generate a pipeline of programs in development for infectious disease, autoimmune disease, inflammation and immune-oncology. The clinical potential of therapeutic manipulation of the microbiome has been validated by multiple randomised, controlled trials in infectious disease and inflammatory bowel disease. Vedanta Biosciences has a leading global intellectual property portfolio in the microbiome field with patents issued by the European Patent Office (EPO), Japan Patent Office (JPO) and the United States Patent and Trademark Office (USPTO), and through patent families exclusively licensed worldwide to Vedanta under an agreement with the University of Tokyo.

Vedanta Biosciences' scientific co-founders have pioneered the fields of innate immunity, Th17 and regulatory T cell biology, and include Dr. Ruslan Medzhitov (Professor of Immunobiology at Yale), Dr. Alexander Rudensky (tri-institutional Professor at the Memorial Sloan-Kettering Institute, the Rockefeller University and Cornell University), Dr. Dan Littman (Professor of Molecular Immunology at NYU), Dr. Brett Finlay (Professor at the University of British Columbia) and Dr. Kenya Honda (Professor, School of Medicine, Keio University). Vedanta is backed by PureTech Health, Seventure, Invesco Asset Management, and Rock Springs Capital.

### **About PureTech Health**

PureTech Health (PureTech Health plc, PRTC.L) is an advanced, clinical-stage biopharmaceutical company developing novel medicines targeting serious diseases that result from dysfunctions in the immune, nervous, and gastro-intestinal systems by intervening early and addressing the underlying pathophysiology of disease. The Company is advancing a rich pipeline that includes two pivotal or registration studies expected to read out in 2017, multiple human proof-of-concept studies and a number of early clinical and pre-clinical programs. PureTech Health's growing research and development pipeline has been developed in collaboration with some of the world's leading scientific experts, who along with PureTech's experienced team and a stellar Board identify, analyse and

advance very selectively the opportunities the Company believes hold the most promise for patients. This experienced and engaged team places PureTech Health at the forefront of ground-breaking science and technological innovation and leads the Company between and beyond existing disciplines. For more information, visit [www.puretechhealth.com](http://www.puretechhealth.com) or connect with us on Twitter [@puretechh](https://twitter.com/puretechh).

### **Forward Looking Statement**

This press release contains statements that are or may be forward-looking statements, including statements that relate to the company's future prospects, developments and strategies. The forward-looking statements are based on current expectations and are subject to known and unknown risks and uncertainties that could cause actual results, performance and achievements to differ materially from current expectations, including, but not limited to, those risks and uncertainties described in the risk factors included in the regulatory filings for PureTech Health plc. These forward-looking statements are based on assumptions regarding the present and future business strategies of the company and the environment in which it will operate in the future. Each forward-looking statement speaks only as at the date of this press release. Except as required by law and regulatory requirements, neither the company nor any other party intends to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.

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